REMARKS

Applicant appreciates the examination of the present application that is evidenced by the Official Action of September 13, 2004 and the indication that Claims 2-5, 8-16 and 19-20 recite allowable subject matter. In response to the Official Action, Applicant has made minor amendments to many of the claims. Applicant will now address the rejections under 35 USC §§ 102 and 112.

The claims do not include "means-plus-function" recitations

Applicant acknowledges that a single means claim is subject to an undue breadth rejection under 35 USC § 112, first paragraph. (See, MPEP 2164.08(a)). However, none of the independent Claims 1, 6 and 17 contain any "means-plus-function" recitations. As noted at MPEP 2181 (see, p. 2100-214, MPEP 8th Edition, attached hereto), "a claim element that does not include the phrase "means for" ... will not be considered to invoke 35 USC 112, sixth paragraph." As illustrated above, none of the Claims 1, 6 or 17 contain any "means for" phrases, which means it is inappropriate for the Examiner to treat these claims as falling under 35 USC 112, sixth paragraph. Moreover, Claims 1, 6 and 17 all recite sufficient structure (e.g., delay-locked loop, feedback loop) to preclude any reasonable argument that these claims can be treated as means-plus-function claims under 35 USC § 112, sixth paragraph.

<u>Claims 1, 6-7 and 17-18 are patentable over U.S. Patent No. 6,100,735</u>

Applicant respectfully submits that the rejections of Claims 1, 6-7 and 17-18 based on U.S. Patent No. 6,100,735 to <u>Lu</u> are improper. Applicant acknowledges that FIGS. 7A-7C of <u>Lu</u> illustrate a mode of operation whereby a total delay through a DLL may exceed more than one period of the input clock ICLK:

> "FIGS. 7A-C highlight how an improper state of operation can occur in a DLL. In FIG. 7A, a DLL detects a phase difference between the input clock ICLK and the final delayed clock DCLK. The DLL adjusts by increasing the delays through the buffer until the total delay through all the buffers is equal to the period of ICLK so that rising edges of ICLK and DCLK are simultaneous, as shown in FIG. 7B.
> <u>Over process and temperature excursions, the DLL may settle into an improper state. The DLL may continue to increase the buffer delays past the one-period alignment. Once the total buffer delay equals two ICLK periods, phase alignment occurs again. FIG. 7C shows phase alignment when the total delay through the DLL buffers equals two periods rather than one.</u>"

('735 patent, Col. 8, lines 4-17, underline added).

To address this mode of operation, <u>Lu</u> uses "special training pulses to initialize the DLL." ('735 patent, Col. 8, lines 36-37). These training pulses are illustrated by FIG. 8 of <u>Lu</u>. Using these training pulses, "the total delay through the buffers [within the DLL] can only equal one ICLK period. <u>Multiple-period delays are not possible</u>." ('735 patent, Col. 8, lines 53-55). Thus, in <u>Lu</u>, the DLL can be <u>prevented</u> from supporting a "multiple-period" lock condition by modifying the ICLK during an initialization period so that it includes training pulses, which are illustrated by FIG. 8 of <u>Lu</u>.

In stark contrast, the DLL of FIG. 3A of the present application is designed to achieve a multiple-period lock condition, which is just the opposite of the DLL in <u>Lu</u>. This multiple-period lock condition is best illustrated by the right side of FIG. 3B of the present application, which shows a "2 cycle full loop lock" condition. Accordingly, not only does <u>Lu</u> not disclose or suggest the subject matter of the pending claims, it actually teaches away from Applicant's invention by disclosing
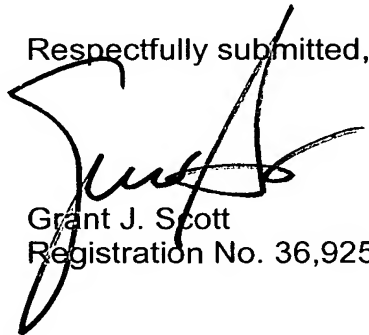
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that multiple-period lock conditions should be avoided. Applicant respectfully

submits, therefore, that all pending claims are patentable over Lu.

CONCLUSION

Applicant has shown that none of the claims include "means-plus-function"

recitations. Applicant has also shown that Lu teaches away from the subject

matter of the pending claims. Accordingly, Applicant respectfully submits that the

present application is in condition for allowance. The Examiner is encouraged to

contact the undersigned in the event any issues remain which may prevent

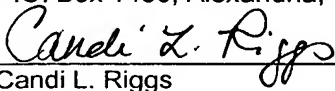issuance of the present application.

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and examples in the specification do not generally limit what is covered by the claims.

The breadth of the claims was a factor considered in *Amgen v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 18 USPQ2d 1016 (Fed. Cir.), *cert. denied*, 502 U.S. 856 (1991). In the *Amgen* case, the patent claims were directed to a purified DNA sequence encoding polypeptides which are analogs of erythropoietin (EPO). The Court stated that:

> Amgen has not enabled preparation of DNA sequences sufficient to support its all-encompassing claims. . . . [D]espite extensive statements in the specification concerning all the analogs of the EPO gene that can be made, there is little enabling disclosure of particular analogs and how to make them. Details for preparing only a few EPO analog genes are disclosed. . . . This disclosure might well justify a generic claim encompassing these and similar analogs, but it represents inadequate support for Amgen's desire to claim all EPO gene analogs. There may be many other genetic sequences that code for EPO-type products. Amgen has told how to make and use only a few of them and is therefore not entitled to claim all of them.

927 F.2d at 1213-14, 18 USPQ2d at 1027. However, when claims are directed to any purified and isolated DNA sequence encoding a specifically named protein where the protein has a specifically identified sequence, a rejection of the claims as broader than the enabling disclosure is generally not appropriate because one skilled in the art could readily determine any one of the claimed embodiments.

See also *In re Wright*, 999 F.2d 1557, 1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (The evidence did not show that a skilled artisan would have been able to carry out the steps required to practice the full scope of claims which encompass "any and all live, non-pathogenic vaccines, and processes for making such vaccines, which elicit immunoprotective activity in any animal toward any RNA virus." (original emphasis)); *In re Goodman*, 11 F.3d 1046, 1052, 29 USPQ2d 2010, 2015 (Fed. Cir. 1993) (The specification did not enable the broad scope of the claims for producing mammalian peptides in plant cells because the specification contained only an example of producing gamma-interferon in a dicot species, and there was evidence that extensive experimentation would have been required for encoding mammalian peptide into a monocot plant at the time of filing); *In re Fisher*, 427 F.2d 833, 839, 166 USPQ

18, 24 (CCPA 1970) (Where applicant claimed a composition suitable for the treatment of arthritis having a potency of "at least" a particular value, the court held that the claim was not commensurate in scope with the enabling disclosure because the disclosure was not enabling for compositions having a slightly higher potency. Simply because applicant was the first to achieve a composition beyond a particular threshold potency did not justify or support a claim that would dominate every composition that exceeded that threshold value.); *In re Vaeck*, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991) (Given the relatively incomplete understanding in the biotechnological field involved, and the lack of a reasonable correlation between the narrow disclosure in the specification and the broad scope of protection sought in the claims, a rejection under 35 U.S.C. 112, first paragraph for lack of enablement was appropriate.).

If a rejection is made based on the view that the enablement is not commensurate in scope with the claim, the examiner should identify the subject matter that is considered to be enabled.

2164.08(a) Single Means Claim

A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

2164.08(b) Inoperative Subject Matter

The presence of inoperative embodiments within the scope of a claim does not necessarily render a claim nonenabled. The standard is whether a skilled person could determine which embodiments that were conceived, but not yet made, would be inoperative or operative with expenditure of no more effort than is normally required in the art. *Atlas Powder Co. v. E.I.*

LANGUAGE FALLING WITHIN 35 U.S.C. 112, SIXTH PARAGRAPH

The USPTO must apply 35 U.S.C. 112, sixth paragraph in appropriate cases, and give claims their broadest reasonable interpretation, in light of and consistent with the written description of the invention in the application. See *Donaldson*, 16 F.3d at 1194, 29 USPQ2d at 1850 (stating that 35 U.S.C. 112, sixth paragraph "merely sets a limit on how broadly the PTO may construe means-plus-function language under the rubric of reasonable interpretation.' "). The Federal Circuit has held that applicants (and reexamination patentees) before the USPTO have the opportunity and the obligation to define their inventions precisely during proceedings before the PTO. See *In re Morris*, 127 F.3d 1048, 1056– 57, 44 USPQ2d 1023, 1029– 30 (Fed. Cir. 1997) (35 U.S.C. 112, second paragraph places the burden of precise claim drafting on the applicant); *In re Zletz*, 893 F.2d 319, 322, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (manner of claim interpretation that is used by courts in litigation is not the manner of claim interpretation that is applicable during prosecution of a pending application before the PTO); *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1425, 44 USPQ2d 1103, 1107 (Fed. Cir. 1997) (patentee who had a clear opportunity to negotiate broader claims during prosecution but did not do so, may not seek to expand the claims through the doctrine of equivalents, for it is the patentee, not the public, who must bear the cost of failure to seek protection for this foreseeable alteration of its claimed structure). Applicants and reexamination patentees before the USPTO have an opportunity and obligation to specify, consistent with these guidelines, when a claim limitation invokes 35 U.S.C. 112, sixth paragraph.

A claim limitation will be interpreted to invoke 35 U.S.C. 112, sixth paragraph if it meets the following 3-prong analysis:

(A) the claim limitations must use the phrase "means for " or "step for ";

(B) the "means for " or "step for " must be modified by functional language; and

(C) the phrase "means for " or "step for " must not be modified by sufficient structure, material or acts for achieving the specified function.

With respect to the first prong of this analysis, a claim element that does not include the phrase "means for" or "step for" will not be considered to invoke 35 U.S.C. 112, sixth paragraph. If an applicant wishes to have the claim limitation treated under 35 U.S.C. 112, sixth paragraph, applicant must either: (A) amend the claim to include the phrase "means for" or "step for" in accordance with these guidelines; or (B) show that even though the phrase "means for" or "step for" is not used, the claim limitation is written as a function to be performed and does not recite sufficient structure, material, or acts which would preclude application of 35 U.S.C. 112, sixth paragraph. See *Watts v. XL Systems, Inc.*, 232 F.3d 877, 56 USPQ2d 1836 (Fed. Cir. 2000) (Claim limitations were held not to invoke 35 U.S.C. 112, sixth paragraph because the absence of the term "means" raised the presumption that the limitations were not in means-plus-function form, nor was the presumption rebutted.) >; see also *Masco Corp. v. United States*, 303 F.3d 1316, 1327, 64 USPQ2d 1182, 1189 (Fed. Cir. 2002) ("[W]here a method claim does not contain the term 'step[s] for,' a limitation of that claim cannot be construed as a step-plus-function limitation without a showing that the limitation contains no act.")<

While traditional "means for" or "step for" language does not automatically make an element a means-(or step-) plus-function element, conversely, lack of such language does not prevent a limitation from being construed as a means-(or step-) plus-function limitation. See *Signtech USA, Ltd. v. Vutek, Inc.*, 174 F.3d 1352, 1356, 50 USPQ2d 1372, 1374– 75 (Fed. Cir.1999) ("ink delivery means positioned on ..." invokes 35 U.S.C. 112, sixth paragraph since the phrase "ink delivery means" is equivalent to "means for ink delivery"); *Al-Site Corp. v. VSI Int' l, Inc.*, 174 F.3d 1308, 1317-19, 50 USPQ2d 1161, 1166-67 (Fed. Cir. 1999) (although the claim elements "eyeglass hanger member" and "eyeglass contacting member" include a function, these claim elements do not invoke 35 U.S.C. 112, sixth paragraph because the claims themselves contain sufficient structural limitations for performing these functions); *Seal-Flex, Inc. v. Athletic Track and Court Construction*, 172 F.3d 836, 850, 50 USPQ2d 1225, 1234 (Fed. Cir. 1999) (Radar, J., concurring) ("claim elements without express step-plus-function language may nevertheless fall within 112 6 if they merely claim the underlying function